

**Table 5.3k**  
**Changes in Daily Average Concentrations ( $\mu\text{gm}^{-3}$ )**  
**under Typical Photochemical Smog Conditions**

AQMS	Nitrogen dioxide	Threshold	RSP	Threshold
Central/Western	14.4	135.6	4.3	175.7
Mong Kok	5.2	144.8	9.0	171.0
Sha Tin	2.5	147.5	6.4	173.6
Yuen Long	0.8	149.2	1.3	178.7
Tsuen Wan	1.6	148.4	2.0	178.0
Kwai Chung	2.6	147.4	5.6	174.4
Sham Shui Po	5.0	145.0	5.1	174.9
Kwun Tong	4.6	145.4	7.9	172.1
Tai Po	2.0	148.0	2.0	178.0

As presented in Table 5.3a, in 1997 the AQMS at Kwun Tong, Mong Kok and Sham Shui Po all reported non-compliances for nitrogen dioxide (concentrations greater than  $150 \mu\text{gm}^{-3}$ ). At these AQMS, it is predicted that the peak twenty four-hour nitrogen dioxide concentrations will increase and hence these stations will remain non-compliant. The number of non-compliant stations is anticipated to remain at three (as reported in 1997) but a single exceedance is predicted at Tai Po which was not reported in 1997. The largest increases are predicted to arise at the Central/Western AQMS which was in compliance with the standard in 1997. The threshold for Central/Western is within 4% of the maximum reported concentration for this AQMS in 1997 and hence it is possible that exceedances would occur.

Figure 5.3i presents the predicted changes in nitrogen dioxide concentrations during a photochemical smog event. Increases of at least  $7.5 \mu\text{gm}^{-3}$  are predicted across whole of Hong Kong Island and in some parts of Kowloon.

Exceedances of the daily average AQO for RSP ( $180 \mu\text{gm}^{-3}$ ) were reported for the Kwun Tong and Sha Tin AQMS in 1997 and under photochemical smog conditions, levels of RSP at these two locations are anticipated to increase by  $7.9$  and  $6.4 \mu\text{gm}^{-3}$  respectively. On this basis, it can reasonably be predicted that continued exceedances of the AQOs at these two AQMS are probable. In addition, a non-compliance has been predicted at the Mong Kok AQMS. The most significant increases in concentration are predicted to occur at the Mong Kok, Kwun Tong and Sha Tin AQMS which are predicted to be non-compliant with the AQO in 2016. For all of the remaining locations, whilst increases in the RSP concentration are anticipated, it is not predicted that these will lead to exceedances of the AQO.

As presented in Figure 5.3j, large areas of the SAR are predicted to experience increases in the daily average levels of RSP under photochemical smog conditions. The most severely impacted areas are in Kowloon and central part of Hong Kong Island with increases of over  $7.5 \mu\text{gm}^{-3}$  anticipated in these areas.

Table 5.3l summarises the predicted concentrations of nitrogen dioxide and RSP under conditions which typically give rise to high levels of RSP across the SAR.